

A LIST OF SNAKES FOUND IN PALAWAN.

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(From the Biological Laboratory, Bureau of Science, Manila, P. I.)

Two collections of snakes from Iwahig, Palawan, one made by Mr. C. M. Weber of Iwahig and the other by Mr. Schultze of this laboratory, have recently been placed in my hands. As these collections add considerably to the known Ophidian fauna of the island, it seems well to publish a complete list of the snakes now known to be found in Palawan. The only other considerable collection of snakes known to be from this island was made about sixteen years ago by Mr. Everett and described by Boulenger.¹

In 1881 Peters² published the description of a snake from Palawan, *Doliophis bilineatus*, "the first poisonous snake recorded from the Philippines." Aside from these papers I do not know of any which treat of Palawan snakes. Cuming sent a number of snakes from the Philippines to the British Museum,³ but since the locality is given as "Philippines" only, it is impossible to take them into account while listing the snakes of any particular locality.

Four new species are described in the following list; there is also recorded one genus and three species already known from other localities but now found for the first time in the Philippines. We now know of thirty-one species of snakes which exist in Palawan. Thorough exploration of the island will undoubtedly add many more species to the list, especially of marine forms. Fourteen species are added to Boulenger's list, and all tend to confirm his conclusion as to the close relationship of the Palawan reptiles with those of Borneo.

The species included in Weber's collection are indicated by an asterisk (*) after the name; those in Schultze's collection by a dagger (†); and those in Everett's collection, listed by Boulenger, by a double dagger (‡).

Python reticulatus (Schneider).*

Found throughout the Philippines.

¹ On the Herpetological Fauna of Palawan and Balabac. *Ann. Nat. Hist.* (1894), 14, 81-89.

² *Sitzungsber. d. Ges. naturfor. Freunde zu Berlin*, 1881.

³ Catalogue of the Snakes in the British Museum.

Polyodontophis bivittatus Blgr.†

Found only in Palawan. The two specimens upon which Boulenger's description is founded are the only ones which have been collected.

Natrix spilogaster (Boie).‡

Found only in the Philippines. This is the most common snake in some parts of the Islands, but Everett's specimen is the only one so far recorded from Palawan.

Natrix chrysaryga (Schleg.)* † ‡

Found only in Palawan and Balabac of the Philippine Archipelago. This species is found outside the Philippines in Java, Sumatra, Borneo, India and China.

Ophites aulicus (Linn.)*

First collected in Palawan by Weber. Common throughout south-eastern Asia, the Malay Archipelago, and the Philippines.

Ophites subcinctus (Boie).*

Found in Palawan, Mindanao, the Malay Peninsula and Archipelago. This is the first record of its occurrence in Palawan.

Dryocalamus philippinus n. sp.†

Maxillary teeth 8; the last two considerably larger than the others, compressed toward their points, and separated from the first six by a short space. The anterior mandibular teeth are slightly longer than the posterior. There is one distinct tooth-like knob on the basisphenoid. Width of head almost twice that of the neck; head much depressed and flattened. Eye large, pupil vertically elliptic. Body slightly compressed and slender. Scales smooth, no pits. Ventrals and subcaudals strongly keeled, the latter in two rows.

Rostral nearly twice as broad as deep, just visible from above; nasal entire; suture between internasals slightly longer than between præfrontals; frontal longer than its distance from the end of the snout, a little shorter than the parietals; loreal longer than deep, entering the eye; one small præ-ocular above the loreal; two post-oculars; temporals 2+3; seven upper labials, the third and fourth entering the eye; four lower labials in contact with the anterior chin-shields, which are longer than the posterior.

Black above, with three white stripes extending from the head to the tip of the tail, each stripe being one scale wide; the stripes are separated from each other and the white lower surface by two scale-rows; the outer row of scales on each side is white; upper lip, angle of jaw, and lower surface of head white; dark brown stripes pass along each side of the head, through the eyes, meet on the occipital region and join the dark stripes on each side of the neck; central portion of frontal and

parietals dark brown, surrounded by a white band which extends onto the præfrontals and internasals.

Total length 241 millimeters; tail 57 millimeters; scales in fifteen rows; anal entire; ventrals 216; subcaudals 99.

Iwahig, Palawan; collected by Mr. W. Schultze.

This seems to be the first specimen of the genus to be found within the Philippines. Members of the genus are found from southern India and Ceylon to Sumatra. In many respects *D. philippinus* is very much like *D. tristrigatus*, but the differences are sufficiently great to clearly differentiate the species. *D. philippinus* differs from all the other species of the genus in the absence of pits on the scales.

***Elaphe oxycephala* (Boie).*‡**

This species is found recorded within the Philippines only from Palawan and Balabac. It is, however, a widely distributed species, found in the eastern Himalayas, Malay Peninsula and Archipelago.

***Elaphe erythrura* (D. & B.).‡**

Widely distributed in the Philippines; also found in Celebes.

***Elaphe philippina* n. sp.*‡**

The species *Elaphe* (*Coluber*) *melanura*, *E. radiata*, *E. erythrura*, and *E. philippina*, form a very closely allied group in which *E. philippina* seems to be intermediate between *E. melanura* and *E. erythrura*. The number of scale rows is the same as in *E. erythrura*, as well as the general shape and arrangement of scales. The proportions of the head and body are, however, constantly different, and with the markings seem to present sufficient differences for constituting a separate species.

Scales feebly keeled, the outer row of scales on the body and tail smooth; rostral slightly broader than deep, broader at the top and more oval in its general outline than in *E. erythrura*; inter-nasals as broad as long, much shorter than the præfrontals; frontal very little longer than broad, as long as or a little shorter than its distance from the end of the snout, shorter than the parietals; loreal as deep as long; one large præocular extending upon the dorsal surface of the head; two small postoculars; temporals 2+2; nine upper labials, fourth, fifth and sixth entering the eye; five or six lower labials in contact with the anterior chin shields, which are a little shorter than the posterior.

Scales in 21 rows on the body and 23 on the neck. Lateral keel of ventrals very obtuse.

Light brown above; upper lip and ventral surface yellowish: the lateral ends of the ventral scales brown: a black streak on the lip below the eye, a black line extending from the eye to the angle of the mouth, and a longer black line extending from the temporals diagonally over the side of the neck; in a young specimen the anterior half of the body is crossed

by fourteen dark bars, each enclosing a white spot in its ventral ends, and sometimes other spots in the dorsal portion. Older specimens show only the lateral parts of the anterior three to six bands; in these the white centers are faint, while the black color extends well down on the sides of the ventral scales. The head of *E. philippina* is slightly narrower than that of *E. erythrurus*, and the end of the snout a little more oblique.

Measurements of two adults of each species are as follows:

From tip of the snout to the posterior end of the parietal suture, *E. erythrurus*, 26 millimeters, 24 millimeters; *E. philippina*, 26 millimeters, 23 millimeters.

Across the widest part of the head, *E. erythrurus*, 20 millimeters, 17½ millimeters; *E. philippina*, 17 millimeters, 15 millimeters.

This shows the head of *E. erythrura* to be a little more than one-sixth wider than that of *E. philippina*.

No.	Sex.	Locality.	Collector.	When collected.	Scale rows.	Anal.	Ventrals.	Sub-caudals.	Total length.	Length of tail.
									mm.	mm.
14	♀	Iwahig, Palawan	C. M. Weber	Feb., 1909	21	1	233	106	1,420	320
15	♀	do	do	do	21	1	238	105	1,340	304
16	♂	do	do	do	21	1	219	110	460	85
17	♀	do	do	do	21	1	236	94	1,420	307
18	♀	do	W. Schultze	Mar., 1909	21	1	227	111	465	107

Boulenger ⁴ gives the number of ventrals of *E. erythrurus* as 211-233, of subcaudals as 86-100. It will be noticed that both the ventrals and subcaudals are more numerous in *E. philippina*.

Dendrophis pictus Gmel.*†‡

Found throughout the Philippines, and also in India, Indo-China, the Malay Peninsula and Archipelago.

Dendrelaphis caudolineatus Gray.*†‡

Found in Palawan, Balabac, southern India, the Malay Peninsula and Archipelago.

Oligodon iwahigensis n. sp.†

Maxillary teeth six; two teeth on each palatine. Nasal divided; portion of rostral seen from above much shorter than its distance from the frontal; suture between the internasals slightly shorter than that between the prefrontals; frontal longer than its distance from the end of the snout, a little shorter than the parietals; loreal very small, longer than deep; one prae- and two post-oculars; temporals 1+2; seven upper labials, third and fourth entering the eye; labials in contact with the

⁴ *Loc. cit.*

anterior chin-shields, which are longer than the posterior. Scales in 15 rows; ventrals 139; anal entire; subcaudals 36.

Dark purplish brown above, with eleven light brown rhomboidal spots along the back. Lateral scales finely flecked with white dots; here and there a larger white spot. Upper surface of head gray-brown, with a transverse brown band passing through the eye, and a chevron shaped band back of this, having its point confluent with the middle of the anterior band. Lower surface of head and throat whitish, with numerous irregular dark brown splotches. Remainder of ventral surface uniform coral-red.

Total length, 324 millimeters; tail, 57 millimeters.

Iwahig, Palawan; collected by Mr. W. Schultze.

Very much like *O. everetti*, except for color and markings. The portion of the rostral seen from above is much shorter, and the shape of other head scales is slightly different.

It differs from *O. notospilus* in having fewer and smaller dorsal spots, two postoculars in place of one, broader bands on the head, and a different coloration.

Ablabes tricolor (Schleg.).†

Iwahig, Palawan. I believe that this is the first record of this snake being found in the Philippines. It also occurs in Java, Sumatra, and Borneo.

Calamaria everetti Blgr.*‡

Known to occur in Palawan and Borneo. The specimen collected by Weber differs markedly in its coloration from those described by Boulenger. This specimen is black above without spots or markings of any kind except on the neck, where the color is very dark brown, and there is a narrow, incomplete yellowish collar. The upper surface of the head is very dark brown, without darker spots. Each scale of the outer row is yellowish in the center, black on the borders. Lower parts dull yellow, tinged with red. No median dark stripe along the lower surface of the tail.

Total length 315 millimeters; tail 26 millimeters. Scale rows 13; ventrals 174; anal entire; subcaudals 25.

Hurria rhynchops (Schneid.).*‡

Found along rocky coasts throughout the Philippines, and from India to New Guinea and Australia.

Boiga cynodon (Boie).†‡

Found in Palawan, Mindanao, Borneo, the Malay Peninsula and Archipelago.

Boiga dendrophila (Schleg.).*†‡

Found in Palawan, Mindanao, Luzon, Malay Peninsula, Borneo, Sumatra, Java, and Celebes.

Psammodynastes pulverulentus Boie.†

Recorded in the Philippines from Palawan, Balabac, Mindanao and Luzon. Found throughout southeastern Asia and the Malay Archipelago.

Dryophis prasinus Boie.*†

Found throughout the Philippines, eastern Himalayas, Burma, Indo-China, the Malay Peninsula and Archipelago.

Chrysopelea ornata (Shaw).*†

This is the first record of this snake in Palawan. It is widely distributed throughout the Philippines and all southeastern Asia.

Distira ornata (Gray).*

Iwahig, Palawan. Widely distributed on the coasts of the Indian and western Pacific oceans.

Laticauda colubrina (Schneider).*

Iwahig, Palawan. Very common and of large size among the Visayan Islands. Widely distributed on the coasts of the Indian and Pacific oceans.

Naja naja (Linnæus) var. **miolepis** Blgr.*†

This variety has not yet been found outside of Palawan and Borneo. In Palawan this cobra is quite common.

Naja naja (Linnæus) var. **cæca** Gmel.*

This variety does not seem to have been captured before in Palawan, or in the southern islands of the Philippines. It is widely distributed in the northern islands, and in India, and has also been found in Java.

The species, with its several varieties, is found throughout southern Asia and the Malay Archipelago.

Naja bungarus Schleg.*

A single specimen, 239 centimeters long, has been collected in Palawan. The species is also found in Luzon. Outside the Philippines it is found throughout India, Burma, southern China, the Malay Peninsula and Archipelago.

Doliophis bilineatus (Peters).*††

Found only in Palawan and Balabac. It seems to be very common in Palawan.

Haplopeltura boa (Boie).*†

To this date this snake has been recorded only from Palawan and Balabac, within the Philippine Archipelago. It is found in Pinang, Borneo, Java, and the Moluccas.

Trimeresurus gramineus (Shaw).*

This is, I believe, the first record of *T. gramineus* occurring in the Philippines. This specimen is dark purplish-blue above, faintly marked

by ill-defined black bars; the upper surface of the head shows a network of faint black lines; belly bluish-green; tail coral-red, the yellow lateral streak being here spotted with purple.

***Trimeresurus wagleri* (Boie).*†‡**

This species has been collected in the Philippines in Palawan, Mindanao, and Albay. Its range includes the entire Malay Archipelago. Two of Schultze's specimens are of a new color variety in which the usual blue or purple lines are replaced by red.

***Trimeresurus sumatranus* (Raffles).‡**

A single specimen was found in Palawan by Everett. Found outside the Philippines in Singapore, Sumatra, and Borneo.

Trimeresurus schultzei* n. sp.

Scales between eyes and gular and occipital scales smooth; scales on body faintly keeled. First lower labial in contact with its fellow behind the symphysial. Tail prehensile; scales in 23 rows; ventrals 203; anal entire; subcaudals 70.

Canthus of snout rounded; diameter of the eye more than half its distance from the tip of the snout. Rostral one-fourth broader than deep; nasal entire; upper head-scales small, smooth, sub-imbricate, rounded behind instead of pointed, irregular in shape and size; 8 between the anterior ends of the supra-oculars; supra-oculars narrow, as long as the diameter of the eye; internasals small, separated by two scales of the same size; a sub-ocular and two or three post-oculars; sub-ocular in contact with the third labial; temporal scales smooth; ten upper labials, the second forming the anterior border of the loreal pit, the third largest.

Olive-green above, with black cross-bars united on the back by zig-zag lines; the dorsal surface of the head marked by a reticulate pattern of distinct black lines; outer row of scales canary-yellow; belly yellowish-green; tail bright red.

Total length, 330 millimeters; tail, 46 millimeters.

Iwahig, Palawan; collected by Mr. W. Schultze.

T. schultzei differs from *T. gramineus* in the following characters: the snout is shorter; the occipital scales are smooth; the inter-nasals are much smaller; the head scales are less pointed and more irregular, imbricating less; the scales of the body are less keeled, the scales are in 23 rows (although *T. gramineus* rarely has 23), ventrals 203; the body is longer in proportion to the tail.